DOCUMENT RESUME

ED 070 614 SE 014 998

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TITLE	Teaching Environmental Education With a Focus on Values.
INSTITUTION	Southern Illinois Univ., Carbondale. Dept. of Conservation and Outdoor Recreation.
PUB DATE	72
NOTE	7p.
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	Affective Behavior; Decision Making; *Environment; *Environmental Education; *Learning Activities; Motivation Techniques; Self Actualization; Teaching Procedures; *Values

ABSTRACT

Helping students to develop their own environmental values and internalizing the valuing process are the topics highlighted in this article. Values-clarification techniques are enumerated, based on the belief that valuing involves processes of choosing, prizing, and acting. To help students clarify their values about the environment, while they are learning the valuing processes, several teaching strategies are suggested. These involve: (1) composing value sheets for student reaction, (2) writing captions for pictures depicting environmental problems, (3) role-playing, (4) creating contrived incidents to stimulate discussion on controversial environmental issues, (5) employing a devil's advocate approach as developing plausible reasons defending various pollution practices and then justifying the position, (6) constructing value continuums, (7) responding to open-ended questions, (8) keeping a time diary for a week, (9) designing an autobiographical questionnaire, (10) voting on current issues, (11) rank-ordering environmental words, statements, and/or problems, and (12) coding phrases, statements, or essays indicating the writer's stand for or against an environmental situation. Teaching environmental education with a focus on values is believed to be not only a stimulating but a necessary approach for today's generation. (BL)

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ED 070614

TEACHING ENVIRONMENTAL EDUCATION WITH A FOCUS ON VALUES[1]

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"Should I ride my bike to school instead of riding in a car or bus that pollutes?"
"Should I wear a sweater when I'm cold instead of turning up the heat and using more fuel?"
"Should I refuse to drink beverages bottled in non-returnable containers, because of the disposal problem?"
"Should I stop burning trash and leaves at home, because this pollutes the air?"

These may be some of the many questions students ask themselves when they consider the environment and what to do about improving it. Environmental decision making is difficult, especially when students see conflicting attitudes and practices within the older generation. For example, some adults warn against using plastic garbage bags because they create disposal problems. Other adults recommend plastic garbage bags to reduce pests and odors. What should students do when taking out the garbage at home? What should they do when faced with the many environmental inconsistencies around them and the necessity of making choices themselves?

Questions of "right and wrong" and "should and should not" involve values. Because these issues are often complex and confusing to students, they need opportunities to think about the values issues involved and to learn to make difficult values choices on their own. The traditional ways of helping children develop values--by setting examples, persuading limiting choices, and establishing rules--have not always worked. Students live only a small part of their lives under our control. They need to develop their own values and to learn a valuing process that will serve them when there is no one around to make decisions for them.

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[1]Parts of this article were originally published by the author in Instructor Magazine, March, 1972 and are reproduced with permission of The Instructor Publications, Inc.

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Publishing, 1972; and Ha
Teaching Subject Matter

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According to a relatively new theory of "values-clarification",[2] teaching the valuing process entails three important steps. First, the teacher should provide opportunities for students to express their ideas, feelings and experiences concerning environmental topics. Time must be provided in the curriculum for the expression of values. Second, these expressions related to environmental issues and concerns should be accepted nonjudgmentally. If they are not, the student will soon learn to keep his true values to himself in order to avoid criticism. Third, the student should be encouraged to examine his position on specific environmental issues in more detail as well as explore other aspects of the problem.

There are many values-clarification techniques available to the teacher for eliciting student ideas, feelings, and experiences, and encouraging deeper examination of them. These techniques are based upon the belief that valuing involves seven processes.

Seven Valuing Processes

A. Choosing

1. Valuing involves choosing freely, not as the result of peer or authority pressure. What beliefs and personal behaviors have you developed concerning the environment that are truly your own, not the result of external pressures?

2. Valuing involves considering alternatives before a choice is made. What alternatives did you consider before determining how you would help improve the environment?

3. Valuing involves carefully examining the consequences of each alternative. Did you consider the consequences of the various ways to combat environmental pollution?

B. Prizing

4. Valuing involves being proud of your choice (not the boastful pride, but the feeling-good-about pride). Are you proud of the ways you selected to ease the pollution problem?

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[2]For a more complete treatment of the values theory on which this article is based and for other values-clarification teaching strategies, see: Raths, Harmin & Simon, Values and Teaching, Columbus, Ohio: Charles E. Merrill, 1966; Simon, Howe and Kirschenbaum, Values-Clarification: A Handbook of Practical Strategies, New York: Hart Publishing, 1972; and Harmin, Kirschenbaum and Simon, Teaching Subject Matter with a Focus on Values.

5. Valuing involves sharing your convictions with others. Have you publicly affirmed your belief in what you chose to do to protect the environment?

C. Acting

6. Valuing involves acting according to your choice and not just having good intentions. What have you actually done within the past week to reduce pollution?

7. Valuing involves acting repeatedly and incorporating the behavior into your life pattern. Did you incorporate these anti-pollution behaviors into your life on a regular basis?

Teachers can weave these seven valuing processes into many student learning activities. The following teaching strategies are designed to help students clarify their values about the environment, while they are learning the seven valuing processes.

Strategies for Clarifying Environmental Values

1. Value Sheets

A value sheet consists of a thought provoking statement or quotation followed by a series of value eliciting questions for the students to respond to. Value sheets can also be composed of questions based on a film, play, or other experience that has been shared by the students.

Example #1:

"People like to make money. If more profit can be made by polluting the earth, people will pollute. If more profit can be made by replacing an old machine, it will be thrown away. Increased profit has been the main reason for our high standard of living in the United States. Everybody is for making the environment a better place until it costs them more money. If pollution control causes a person to lose his job or causes him any inconvenience, he is not for it."

To think and write on:

a. Do you agree with the author's point of view about people and what they seem to value most?

b. Can you think of five things you value even more than money? List them.

c. What percentage of your allowance (income) would you be willing to give to improving the environment?

d. If you had to give up five electrical appliances or machines in your house to cut down on pollution, which would be the five
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Example #2:

Our society depends up
natural environment.

To think and write on:

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b. Which changes in t
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d. Is this something
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2. Picture Without A Capti

Have the students writ
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3. Role-Playing

Describe a situation w
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study of an issue in order

Example #1:

"To the Daily Egyptian:
When spring arrives th
will be re-enacted on the c

would be the five easiest to do without? How would you feel if a new law was passed requiring you and your family to reduce electricity usage by one third? Would you do this without a law?

Example #2:

Our society depends upon man's ability to change the natural environment.

paraphrased from Orris C. Herfindahl and Allen V. Kneese, Quality of the Environment. Resources for the Future, Inc. p. 1.

To think and write on:

a. How has man changed the natural environment in your community? (e.g., planted lawns, built roads, cleared land for shopping centers, etc.)

b. Which changes in the environment do you think were good and which were bad for your community? Consider both short term and long term effects.

c. If you could make a change in your community's environment what would you change? What would the consequences be?

d. Is this something you'd like to work on? What would your first steps have to be?

2. Picture Without A Caption

Have the students write a caption to a picture depicting an environmental problem. The caption may reveal the students' values about particular environmental problems. Divide the students into small groups and provide an opportunity for them to share their captions. Ask them if they learned something about their environmental values and those of others in the classroom. (See pictures accompanying this article)

3. Role-Playing

Describe a situation which presents different viewpoints on an issue and have the students assume the roles of the individuals involved. Role-playing can point out a need for further study of an issue in order to better understand the facts.

Example #1:

"To the Daily Egyptian:
When spring arrives this year, an indefensibly cruel scene will be re-enacted on the coasts of the Northwest Atlantic and

Gulf of St. Lawrence. Every spring and summer, thousands of baby seals are brutally slaughtered by Canadian and Norwegian hunters. The single purpose of these mass killings is to collect seal pelts, which are made into fur clothing.

Whatever dubious justification exists for killing innocent creatures solely for their fur, there certainly can be no defensible excuse for the manner in which these seals are murdered. The hunters club and skin them, in many cases while they are still conscious. Last spring alone, 260,000 baby seals were killed in this way. The United States government, on whose soil this barbarism is taking place, has failed to put an end to the manner in which these animals are being destroyed."

Sue Carruthers
Graduate student
Government

(Daily Egyptian, p. 4, March 3, 1970)

Have students play the roles of the letter writer, a seal hunter, a United States government official and an official from Canada and Norway.

Example #2:

At a city council meeting, an ordinance to ban the sale of non-returnable beverage containers is to be voted upon. Before the vote is taken the mayor reads three letters received from three concerned citizens.

Letter #1

Dear Mayor:
As a consumer, I urge that the council defeat the proposed ordinance that would ban the sale of non-returnable beverage containers in the city. Many of my favorite drinks are not available in anything but throw-away bottles or cans. It would be an inconvenience for me to drive to the next town to buy them there. Besides, this is supposed to be a "free country." This law would take away my freedom to buy the beverages I like in my home town.

Signed,
Bert Cross

Letter #2

Dear Mayor:
Please tell the city council to vote for the ordinance to ban non-returnable beverage containers. As you know, we have a litter problem in the city and the ban would reduce it considerably. Besides, as you may know, it costs less to buy drinks in returnable containers. Our city should be a leader in doing something about our nation's refuse problem.

Signed,
Betty Smith

Letter #3

Dear Mayor:
As a member of the Chamber of Co
voice my opposition to the proposed l
non-returnable bottles and cans. Many
will drive to neighboring towns to pu
Our businesses will suffer from the o
will lose their jobs and be inconvenie
on this issue.

Signed,
Philip H

Role play the city council meeting hav
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4. Contrived Incidents

The teacher can create situations
of controversial environmental issues.

Example:

The teacher can take the students
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The teacher can develop plausible
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Example:

The teacher could state reasons w
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a. it keeps the cost of the chem
b. the industry could not compet
industries if it had to build
ment facilities
c. rivers have been used to disp
d. most of the public doesn't re

continues

After the short talk justifying c
the teacher should encourage discussio

Letter #3

Dear Mayor:

As a member of the Chamber of Commerce, I would like to voice my opposition to the proposed law to ban the sale of non-returnable bottles and cans. Many people in our community will drive to neighboring towns to purchase non-returnables. Our businesses will suffer from the ordinance and some people will lose their jobs and be inconvenienced. Please vote "no" on this issue.

Signed,
Philip Harding

Role play the city council meeting having the students take the positions of the letter writers and other interested citizens.

4. Contrived Incidents

The teacher can create situations which stimulate discussion of controversial environmental issues.

Example:

The teacher can take the students on a short walk on the school grounds during which the teacher casually throws a piece of paper on the ground and walks away. The teacher could also break a limb from a tree or write on the school building with chalk. A guest speaker could be invited into the classroom to disagree with the teacher on an environmental issue. After the incidents, the students can discuss their thoughts and feelings.

5. Devil's Advocate

The teacher can develop plausible reasons defending various pollution practices and attempt to justify that position to the students.

Example:

The teacher could state reasons why a chemical factory should be allowed to continue to dump waste into a river. Some plausible reasons could be:

a. it keeps the cost of the chemical products low
b. the industry could not compete with other chemical industries if it had to build expensive waste treatment facilities
c. rivers have been used to dispose of wastes for centuries
d. most of the public doesn't really care if the dumping continues

After the short talk justifying certain kinds of pollution, the teacher should encourage discussion on the topic.

6. Value Continuums

The teacher can construct an environmental value continuum and place it on the blackboard. Have the students go to the board in turn and place a mark on the line indicating their position. Have them indicate some of the reasons for selecting their position.

Examples:

What is your position on these value lines?

Returnable Ron ----------No-deposit Norris

He uses only returnable containers and will not eat or drink anything that comes in a throw-away container	He uses only non-returnable containers because he thinks that returnables are too much trouble to take back

Bike-riding Betty ----------Motoring Mable

She doesn't use any vehicles that pollute the air and therefore rides her bike to work 40 miles away each day	She uses motor vehicles every chance she gets. She even retrieves the evening paper by taking the car down the driveway of her home

Pure-air Paul ----------Polluted Polly

He is so opposed to air pollution that he takes short breaths so he won't add as much carbon dioxide to the air	She is so uncaring about air pollution that she burns cigarettes for incense

Let-live Larry ----------Pesticide Pete

He is so against any type of pesticide that he allows mosquitoes to bite him rather than swat them	He uses pesticides so freely that he sprays his house and back yard daily to get rid of insects

7. Open-Ended Questions

An open-ended question is written on the blackboard and the students are asked to respond in writing. Student responses may indicate some of the values which they believe to be important.

Example:

a. "If I had the power to correct one environmental problem, I would choose . . ."
b. "The best way to reduce noise in my community is to . . ."
c. "The school grounds could be made more beautiful by . . ."
d. "I would rather . . ."
e. "All of the atte papers and on te
f. "The laws regula

8. Time Diary

The student is asked time for one week. A tim son does every hour or ha stressed that this is a p read. After completion o respond to such questions

Examples:

a. What have you do have contributed
b. What have you do have made your e live?
c. How many hours d electricity? If this amount of t
d. In general, are how you used you

9. Autobiographical Ques

The teacher can cons students' behavior in reg

Example:

Have you ever:

a. thrown refuse on
b. picked up litter
c. burned trash out
d. reported a viola
e. donated time or
f. fixed a leaking
g. asked your mothe less harmful one
h. written a letter the environment?
i. written a letter your position on

Students write, then these activities. In thi alternatives for environm build into their own live

d. "I would rather live with a little pollution than . . ."
e. "All of the attention paid to pollution in the newspapers and on television is . . ."
f. "The laws regulating pollution should be . . ."

8. Time Diary

The student is asked to keep a record of how he spends his time for one week. A time diary is a chart listing what a person does every hour or half-hour during the week. It should be stressed that this is a private diary that the teacher will not read. After completion of the diary, the students are asked to respond to such questions as:

Examples:

a. What have you done this week, if anything, that might have contributed to pollution?
b. What have you done this week, if anything, that might have made your environment a better place in which to live?
c. How many hours did you spend which involved the use of electricity? If you wanted to, how could you reduce this amount of time next week? Do you want to?
d. In general, are you proud of (do you feel good about) how you used your time this week?

9. Autobiographical Questionnaire

The teacher can construct questions which will examine the students' behavior in regard to environmental pollution.

Example:

Have you ever:

a. thrown refuse on the ground or in the water?
b. picked up litter from the ground?
c. burned trash outside?
d. reported a violation of a fish or game law?
e. donated time or money to an environmental organization?
f. fixed a leaking water fixture immediately?
g. asked your mother to change her laundry detergent to a less harmful one?
h. written a letter to the editor protesting a misuse of the environment?
i. written a letter to a governmental official expressing your position on an environmental issue?

Students write, then talk about, any time(s) they have done these activities. In this way, studens hear from their peers alternatives for environmental action which they might want to build into their own lives.

10. Voting

The teacher asks questions which require the students to take a stand on issues by raising their hand. The purpose of voting is to direct the students' attention to a problem that they may not have thought much about. The teacher should vote too and show that he/she is human.

Example:

a. How many use lead-free gas in your family car?
b. How many have ever thrown a piece of paper on the ground and left it?
c. How many have passed litter without picking it up?
d. How many have purchased non-returnable bottles during the last week?
e. How many have refused to buy something because it had excess packaging?
f. How many have refused to have their purchases placed in a paper bag at the store in order to conserve paper?

11. Rank Ordering

Words or statements are placed on the blackboard and the students are asked to rank them in order of their preference. Rank ordering can lead to discussions of why different students have varying preferences.

Example:

Given a small budget to spend on the litter problem in your community, how would you rank the following proposals to spend the money?

a. purchase litter containers
b. place no littering signs in strategic places
c. hire someone to pick up litter

If you had the money to purchase machinery to recycle only one type of material, how would you rank the following in importance in your community?

a. paper
b. glass
c. aluminum

Your city owns 1000 acres on the edge of town. How would you rank the following land uses? (After the ranking: What other alternatives would you suggest?)

a. lease the land to a strip mining company with the understanding that the city would share in some of the profits and the company would reclaim the land

b. sell the land to a lar
development of a shoppi
c. lease the land for gra

12. Coded Papers

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newspapers and magazines. Stud
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taken on an issue.

Example:

Place pluses next to words or p
minuses next to words or phrase

A CONSERVATIONI

The world is finite, resources a
Things are bad and will be worse
Coal is burned and gas exploded.
Forests cut and soils eroded.
Wells are dry and air's polluted
Dust is blowing, trees uprooted.
Oil is going, ores depleted,
Drains receive what is excreted.
Land is sinking, seas are rising
Man is far too enterprising.
Fire will rage with Man to fan i
Soon we'll have a plundered plan
People breed like fertile rabbit
People have disgusting habits.

Moral:
The evolutionary plan
Went astray by evolving man

THE TECHNOLOGI

Man's potential is quite terrifi
You can't go back to the Neolith
The cream is there for us to ski
Knowledge is power, and the sky'

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[1] William L. Thomas, Jr., ed
Face of the Earth (Chicago
Press, 1956), p. 1087.

[2] Ibid.

b. sell the land to a large department store for development of a shopping center
c. lease the land for grazing

12. Coded Papers

The teacher of students can code papers with pluses (+) or minuses (-) indicating what the writer is for (+) or against (-). The papers can be written by the students and the teacher can do the coding instead of assigning a letter grade. The students can also code papers to indicate where they agree and disagree with the author. This technique is also useful in analyzing environment articles which appear in newspapers and magazines. Students can more clearly determine the writer's values and understand why a certain position is taken on an issue.

Example:

Place pluses next to words or phrases that you agree with and minuses next to words or phrases that you disagree with.

A CONSERVATIONIST'S LAMENT[1]

The world is finite, resources are scarce.
Things are bad and will be worse.
Coal is burned and gas exploded.
Forests cut and soils eroded.
Wells are dry and air's polluted,
Dust is blowing, trees uprooted.
Oil is going, ores depleted,
Drains receive what is excreted.
Land is sinking, seas are rising,
Man is far too enterprising.
Fire will rage with Man to fan it,
Soon we'll have a plundered planet.
People breed like fertile rabbits,
People have disgusting habits.

Moral:
The evolutionary plan
Went astray by evolving man.

THE TECHNOLOGIST'S REPLY[2]

Man's potential is quite terrific
You can't go back to the Neolithic.
The cream is there for us to skim it,
Knowledge is power, and the sky's limit.

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[1] William L. Thomas, Jr., ed., Man's Role in Changing the Face of the Earth (Chicago: The University of Chicago Press, 1956), p. 1087.

[2] Ibid.

Every mouth has hands to feed it.
Food is found when people need it.
All we need is found in granite
Once we have the men to plan it.
Yeast and algae give us meat,
Soil is almost obsolete.
Men can grow to pastures greener
Till all the earth is Pasadena.

Moral:
Man's a nuisance, Man's a crackpot
But only man can hit the jackpot.

---Kenneth Boulding

Additional Values-Clarification Activities

1. Read the following story and then list the names of the characters according to shom you liked the most and whom you liked least. Discuss the lists after completing them. Try to describe some of the values you think each man may hold. Have the students discuss how the situation could be resolved.

The Ajax Paper Company was dumping poisonous chemicals into a stream, causing the fish to die and the water to become smelly and polluted. Mr. Pedigrew, president of the company, knew that the fishing, swimming, and tourist businesses were suffering, but pollution control would have cost the company a lot of money. The company employed about half of the town's residents and doing something about the problem would mean that most of them might have to be fired. Mr. Chambers, chairman of the town's chamber of commerce and long-time friend of Mr. Pedigrew, wanted to bring more tourists to the area, but didn't want to report the pollution because of the already high unemployment in the area. Mr. Chambers wanted instead to develop another amusement park to attract more tourists as well as to provide more jobs. Mr. Barnum, owner of the only amusement park in the area, feared the competition of another amusement attraction and reported the polluting paper company to state environmental control officials. The company was closed down and the employees were put out of work. Mr. Townsend, mayor of the town, sympathized with the families of the unemployed workers and wrote a letter to the state to try to reopen the paper company even though it would still pollute the stream. Mr. Moneybags, owner of a large summer resort, became so angry with the mayor's attempt to reopen the paper company, that he withdrew his support for a community park that the mayor was promoting, making it impossible to complete the project.

2. Make a survey of how foods are packaged for sale. Bring in samples of packaging which seems to be excessive and wasteful. Why do manufacturers sometimes use packaging which appears to waste materials? How much refuse could be eliminated if products were packaged differently: Display your findings on poster
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3. Because electricity is
fuels which pollute the
short supply, life on e
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entirely. (e.g., elect
television, etc.)

4. Conduct a panel discuss
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6. Conduct a classroom dis
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clarify their values ab
specific animals such a
bark beetle, bag worm,
beetle, and boll weevil
ragweed, and poison sum
ecology of an area leas
Does the whole class ag
is a pest?

7. Discuss Ogden Nash's po

"I think that I shall n
A billboard as lovely
And unless the billboa
I'll never see a tree

Did the poet really mea
as billboards are there
depended upon the touri
the same way? Write a
man's point of view.

Co

These, then, are some
their own environmental valu
valuing processes.

your findings on posters. What would happen if people didn't buy products that had excess packaging?

3. Because electricity is derived largely from burning fossil fuels which pollute the environment and are in relatively short supply, life on earth can be improved by using less electricity. Have the students make a list of those electrical conveniences that they could use less or eliminate entirely. (e.g., electric toothbrush, lights, radio and television, etc.)

4. Conduct a panel discussion or debate concerning the question of whether drilling for oil under water should be continued in certain areas. Also discuss placing oil pipes above ground as some oil companies propose in Alaska. Consider the viewpoints of the oil companies, ecologists, local citizens, and governmental officials.

5. Have the students design a vehicle for a family to use in the city. They should consider such factors as air pollution, size of vehicle, how to park it, and where it should travel (above or below ground) in the city. How does each design reflect the student's values?

6. Conduct a classroom discussion about the pros and cons of completely eradicating a particular pest. If students assume opposing viewpoints, the discussion will serve to help clarify their values about the environment. Examine specific animals such as the mosquito, Japanese beetle, elm bark beetle, bag worm, tick, flea, chigger, aphid, blister beetle, and boll weevil. Examine plants such as poison ivy, ragweed, and poison sumac. Which ones will affect the ecology of an area least if they are completely eradicated? Does the whole class agree that a particular plant or animal is a pest?

7. Discuss Ogden Nash's poem:

"I think that I shall never see
A billboard as lovely as a tree
And unless the billboards fall,
I'll never see a tree at all."

Did the poet really mean that he'd never see a tree as long as billboards are there? If he were a businessman who depended upon the tourists who saw the sign, would he feel the same way? Write a poem about billboards from a businessman's point of view.

Conclusion

These, then, are some ways of helping students develop their own environmental values and internalize the seven valuing processes.

But what about the teacher's values? Here are some questions the teacher might look at to assess some of his/her own educational and environmental values:

a. What are some environmental problems existing in your community? (e.g., sewage leaks, open burning, mosquitoes)
b. Do you know of some effective means for dealing with these problems in your community?
c. Which of these problems would provide opportunities for meaningful involvement of the students in your class?
d. Which should be given the most emphasis in your curriculum: local, regional, state, national, or world environmental problems?
e. Are you optimistic or pessimistic about the future quality of the environment?
f. Which environmental values of your students should you attempt to influence and which should you not attempt to change?
g. What influence do you have on the environmental values of your students?
h. Are the different viewpoints in an environmental controversy discussed in your class?
i. Which instructional techniques are used in your class to teach about environmental problems? (e.g., games, role playing, field trips, newspapers, guest speakers, films, slides, books, periodicals)

Teaching environmental education with a focus on values is no easy job. But the possibilities open to the teacher in this area are exciting, numerous and varied. And when we pause to think about it: if we <u>don't</u> teach environmental education with a focus on values <u>now</u>, the next generation may not be around to do it for us.